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Load Short Form
MINI SPLIT
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

820 N MAIN ST., WILLISTON, FL 32696 Phone: 352-529-1034 Fax: 352-529-0007 Email: jeffbabione@embarqmail.com Web: www.babionesac.com License: CACO58697

Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Design Information

	Htg	Clg
Outside db (°F)	33	94
Inside db (°F)	70	75
Design TD (°F)	37	19
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	32	46

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

HEATING EQUIPMENT

Make	MITSHUBISHI
Trade	TRANE
Model	NTXSMT09A112A*
AHRI ref	202373737

Efficiency	10 HSPF	
Heating input		
Heating output	9500	Btuh @ 47°F
Temperature rise	29	°F
Actual air flow	300	cfm
Air flow factor	0.104	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 6 °F

Backup:
Input = 2 kW, Output = 5141 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	MITSHUBISHI
Trade	TRANE
Cond	NTXSMT09A112A*
Coil	NTXWMT09A112A*
AHRI ref	202373737

Efficiency	12.0 EER, 18 SEER	
Sensible cooling	6300	Btuh
Latent cooling	2700	Btuh
Total cooling	9000	Btuh
Actual air flow	300	cfm
Air flow factor	0.268	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.86	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
WORKSHOP	157	2879	1119	300	300
MINI SPLIT d	157	2879	1119	300	300
Other equip loads		0	0		
Equip. @ 0.99 RSM			1102		
Latent cooling			182		
TOTALS	157	2879	1284	300	300

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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Load Short Form
UP STAIRS
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

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Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Design Information

	Htg	Clg
Outside db (°F)	33	94
Inside db (°F)	70	75
Design TD (°F)	37	19
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	32	46

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

HEATING EQUIPMENT

Make	Trane
Trade	TRANE
Model	4TWR4018G1
AHRI ref	8908426

Efficiency	8.5 HSPF	
Heating input		
Heating output	17200	Btuh @ 47°F
Temperature rise	26	°F
Actual air flow	600	cfm
Air flow factor	0.117	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 5 °F

Backup:
Input = 2 kW, Output = 5141 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Trane
Trade	TRANE
Cond	4TWR4018G1
Coil	TEM4A0B18S21++TDR
AHRI ref	8908426

Efficiency	11.5 EER, 14 SEER	
Sensible cooling	12600	Btuh
Latent cooling	5400	Btuh
Total cooling	18000	Btuh
Actual air flow	600	cfm
Air flow factor	0.125	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.83	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BATH	64	0	0	0	0
STAIRS	51	858	170	100	21
BEDROOM 1	120	1197	1283	140	161
BATH1	50	534	307	62	38
BATH 2	50	391	230	46	29
BEDROOM 2	120	1105	1317	129	165
STAIRS 1	65	716	410	84	51
LIVING	81	340	1072	40	134

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

UP STAIRS Other equip loads Equip. @ 0.99 RSM Latent cooling	d	601	5141 0	4790 0 4718 950	600	600
TOTALS		601	5141	5667	600	600

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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Project Summary
MINI SPLIT
BABIONE'S A/C & HEATING INC.

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Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Notes: NEW CONSTRUCTION GARAGE

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	94 °F
Inside db	75 °F
Design TD	19 °F
Daily range	M
Relative humidity	50 %
Moisture difference	46 gr/lb

Heating Summary

Structure	2879 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	2879 Btuh

Sensible Cooling Equipment Load Sizing

Structure	1119 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.99
Equipment sensible load	1102 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	157	157
Volume (ft³)	1569	1569
Air changes/hour	0.41	0.22
Equiv. AVF (cfm)	11	6

Latent Cooling Equipment Load Sizing

Structure	182 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	182 Btuh
Equipment Total Load (Sen+Lat)	1284 Btuh
Req. total capacity at 0.70 SHR	0.1 ton

Heating Equipment Summary

Make	MITSHUBISHI
Trade	TRANE
Model	NTXSMT09A112A*
AHRI ref	202373737

Efficiency	10 HSPF
Heating input	
Heating output	9500 Btuh @ 47°F
Temperature rise	29 °F
Actual air flow	300 cfm
Air flow factor	0.104 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 6 °F	

Backup:
Input = 2 kW, Output = 5141 Btuh, 100 AFUE

Cooling Equipment Summary

Make	MITSHUBISHI
Trade	TRANE
Cond	NTXSMT09A112A*
Coil	NTXWMT09A112A*
AHRI ref	202373737

Efficiency	12.0 EER, 18 SEER
Sensible cooling	6300 Btuh
Latent cooling	2700 Btuh
Total cooling	9000 Btuh
Actual air flow	300 cfm
Air flow factor	0.268 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.86

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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Project Summary
UP STAIRS
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
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Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Notes: NEW CONSTRUCTION GARAGE

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	94 °F
Inside db	75 °F
Design TD	19 °F
Daily range	M
Relative humidity	50 %
Moisture difference	46 gr/lb

Heating Summary

Structure	5141 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	5141 Btuh

Sensible Cooling Equipment Load Sizing

Structure	4790 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.99
Equipment sensible load	4718 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	601	601
Volume (ft³)	4807	4807
Air changes/hour	0.41	0.22
Equiv. AVF (cfm)	33	18

Latent Cooling Equipment Load Sizing

Structure	950 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	950 Btuh
Equipment Total Load (Sen+Lat)	5667 Btuh
Req. total capacity at 0.70 SHR	0.6 ton

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	4TWR4018G1
AHRI ref	8908426

Efficiency	8.5 HSPF
Heating input	
Heating output	17200 Btuh @ 47°F
Temperature rise	26 °F
Actual air flow	600 cfm
Air flow factor	0.117 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 5 °F	

Backup:
Input = 2 kW, Output = 5141 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	4TWR4018G1
Coil	TEM4A0B18S21++TDR
AHRI ref	8908426

Efficiency	11.5 EER, 14 SEER
Sensible cooling	12600 Btuh
Latent cooling	5400 Btuh
Total cooling	18000 Btuh
Actual air flow	600 cfm
Air flow factor	0.125 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.83

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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Duct System Summary
MINI SPLIT
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

820 N MAIN ST., WILLISTON, FL 32696 Phone: 352-529-1034 Fax: 352-529-0007 Email: jeffbabione@embarqmail.com Web: www.babionesac.com License: CACO58697

Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.250 / 0.250 in H2O	0.250 / 0.250 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	300 cfm	300 cfm
Total effective length (TEL)	0 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
WORKSHOP	c 559	150	150	0	0	0x 0	ShMt	0	0	
WORKSHOP-A	c 559	150	150	0	0	0x 0	ShMt	0	0	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb9	0x 0	300	300	0	0	0	0	0x 0		ShMt	

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Duct System Summary
UP STAIRS
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

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Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.209 / 0.291 in H2O	0.209 / 0.291 in H2O
Lowest friction rate	0.068 in/100ft	0.068 in/100ft
Actual air flow	600 cfm	600 cfm
Total effective length (TEL)	731 ft	

Supply Branch Detail Table

Name	Design (Btuh)		Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
BATH 2	h	391	46	29	0.069	***4.0***	***0x 0***	VlFx	23.1	280.0	st3A
BATH1	h	534	62	38	0.078	***4.0***	***0x 0***	VlFx	33.5	235.0	st3A
BEDROOM 1	c	1283	140	161	0.068	***8.0***	***0x 0***	VlFx	40.8	265.0	st3B
BEDROOM 2	c	1317	129	165	0.132	8.0	0x 0	VlFx	13.3	145.0	st3
LIVING-A	c	1072	40	134	0.109	8.0	0x 0	VlFx	26.7	165.0	st3
STAIRS	h	170	100	21	0	0	0x 0	VlFx	0	0	
STAIRS 1	h	716	84	51	0.082	***6.0***	***0x 0***	VlFx	39.9	215.0	st3A

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	500	579	0.068	541	14.0	0 x 0	VinlFlx	st1
st1	Peak AVF	500	579	0.068	541	14.0	0 x 0	VinlFlx	
st3B	Peak AVF	140	161	0.068	364	9.0	0 x 0	VinlFlx	st3A
st3A	Peak AVF	331	279	0.068	422	12.0	0 x 0	VinlFlx	st3

Bold/italic values have been manually overridden

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb8	0x 0	235	206	425.3	0.068	432	10.0	0x 0		VlFx	rt1A
rb7	0x 0	157	193	319.3	0.091	437	9.0	0x 0		VlFx	rt1
rb6	0x 0	208	201	246.8	0.118	471	9.0	0x 0		VlFx	rt1

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	600	600	0.068	561	14.0	0 x 0	RectFbg	
rt1A	Peak AVF	235	206	0.068	432	10.0	0 x 0	RectFbg	rt1

Manual S Compliance Report
MINI SPLIT
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

820 N MAIN ST., WILLISTON, FL 32696 Phone: 352-529-1034 Fax: 352-529-0007 Email: jeffbabione@embarqmail.com Web: www.babionesac.com License: CACO58697

Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Cooling Equipment

Design Conditions

Outdoor design DB:	93.5°F	Sensible gain:	1119	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	76.5°F	Latent gain:	182	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	1300	Btuh		
Indoor RH:	50%	Estimated airflow:	300	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	MITSHUBISHI		Model:	NTXSMT09A112A*+NTXWMT09A112A*	
Actual airflow:	300	cfm			
Sensible capacity:	6300	Btuh	563% of load		
Latent capacity:	2700	Btuh	1486% of load		
Total capacity:	9000	Btuh	692% of load	SHR:	70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	2879	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP						
Manufacturer:	MITSHUBISHI		Model:	NTXSMT09A112A*+NTXWMT09A112A*			
Actual airflow:	300	cfm					
Output capacity:	9500	Btuh	330% of load		Capacity balance:	5.8	°F
Supplemental heat required:	0	Btuh			Economic balance:	-99	°F

Meets all requirements of ACCA Manual S.

wrightsoft

Manual S Compliance Report
UP STAIRS
BABIONE'S A/C & HEATING INC.

Job:
Date: Apr 06, 2021
By: JEFF

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Project Information

For: RELYEA RESIDENCE GARAGE AREA, JOSHUA SHATKIN
HIGH SPRINGS, FL
Phone: 352-222-3443

Cooling Equipment

Design Conditions

Outdoor design DB:	93.5°F	Sensible gain:	4790	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	76.5°F	Latent gain:	950	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	5739	Btuh		
Indoor RH:	50%	Estimated airflow:	600	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane		Model:	4TWR4018G1+TEM4A0B18S21++TDR	
Actual airflow:	600	cfm			
Sensible capacity:	14105	Btuh	294% of load		
Latent capacity:	2270	Btuh	239% of load		
Total capacity:	16375	Btuh	285% of load	SHR:	86%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	5141	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP					
Manufacturer:	Trane		Model:	4TWR4018G1+TEM4A0B18S21++TDR		
Actual airflow:	600	cfm				
Output capacity:	17200	Btuh	335% of load		Capacity balance:	4.5 °F
Supplemental heat required:		0	Btuh		Economic balance:	-99 °F

Backup equipment type:	Elec strip					
Manufacturer:			Model:			
Actual airflow:	600	cfm				
Output capacity:	1.5	kW	100% of load	Temp. rise:	50	°F

Meets all requirements of ACCA Manual S.

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Air Conditioning Contractors of America

Header Information

Contractor: BABIONE'S A/C & HEATING INC.

Mechanical license: CACO58697

Building plan #:

Home address (Street or Lot#, Block, Subdivision): , MINI SPLIT

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets):	Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	33	°F
Indoor temperature:	70	°F
Total heat loss:	2879	Btuh

Summer Design Conditions

Outdoor temperature:	94	°F
Indoor temperature:	75	°F
Grains difference:	46 gr/lb @	50% RH
Sensible heat gain:	1136	Btuh
Latent heat gain:	184	Btuh
Total heat gain:	1320	Btuh

Building Construction Information

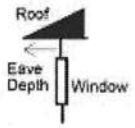
Building

Orientation: Front Door faces East
North, East, West, South, Northeast, Northwest, Southeast, Southwest

Number of bedrooms:	0	
Conditioned floor area:	157	ft²
Number of occupants:	0	

Windows

Eave overhang depth:	1.0	ft
Internal shade: (Blinds, drapes, etc.)	none	
Number of skylights:	0	



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: (Furnace, Heat pump, Boiler, etc.) Split ASHP

Model: MITSHUBISHI NTXSMT09A112A*+NTXWMT09A112A*

Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions

Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: (Air Conditioner, Heat pump, etc.) Split ASHP

Model: MITSHUBISHI NTXSMT09A112A*+NTXWMT09A112A*

Total cooling capacity:	0 Btuh
Sensible cooling capacity:	0 Btuh
Latent cooling capacity:	0 Btuh

Blower Data

Heating cfm:	300
Cooling cfm:	300
Static pressure:	0.50 in H2O

Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	300 cfm	Longest supply duct:	0 ft	Duct Materials Used	
Equipment design ESP:	0.50 in H2O	Longest return duct:	0 ft	Trunk duct:	
Total device pressure losses:	0 in H2O	**Total effective length (TEL):**	0 ft		
Available static pressure (ASP):	0.50 in H2O	**Friction rate:** (Friction Rate = ASP ÷ (TEL x 100))	0 in/100ft	Branch duct:	Sheet metal

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Air Conditioning Contractors of America

Header Information

Contractor: BABIONE'S A/C & HEATING INC.

Mechanical license: CACO58697

Building plan #:

Home address (Street or Lot#, Block, Subdivision): , UP STAIRS

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets):	Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	33	°F
Indoor temperature:	70	°F
Total heat loss:	5141	Btuh

Summer Design Conditions

Outdoor temperature:	94	°F
Indoor temperature:	75	°F
Grains difference:	46 gr/lb @ 50% RH	
Sensible heat gain:	4863	Btuh
Latent heat gain:	964	Btuh
Total heat gain:	5827	Btuh

Building Construction Information

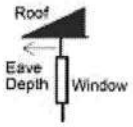
Building

Orientation: Front Door faces East
North, East, West, South, Northeast, Northwest, Southeast, Southwest

Number of bedrooms:	0	
Conditioned floor area:	601	ft²
Number of occupants:	2	

Windows

Eave overhang depth:	1.0	ft
Internal shade: Blinds, drapes, etc.	none	
Number of skylights:	0	



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Furnace, Heat pump, Boiler, etc.	Split ASHP	
Model:	Trane 4TWR4018G1+TEM4A0B18S21++TDR	
Heating output capacity: Heat pumps - capacity at winter design outdoor conditions	0	Btuh
Aux. heating output capacity:	5141	Btuh

Cooling Equipment Data

Equipment type: Air Conditioner, Heat pump, etc.	Split ASHP	
Model:	Trane 4TWR4018G1+TEM4A0B18S21++TDR	
Total cooling capacity:	16375	Btuh
Sensible cooling capacity:	14105	Btuh
Latent cooling capacity:	2270	Btuh

Blower Data

Heating cfm:	600
Cooling cfm:	600
Static pressure: Fan's rated external static pressure for design airflow	0.50 in H2O

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	600	cfm
Equipment design ESP:	0.50	in H2O
Total device pressure losses:	0	in H2O
Available static pressure (ASP):	0.50	in H2O

Longest supply duct:	306	ft
Longest return duct:	425	ft
Total effective length (TEL):	731	ft
Friction rate: Friction Rate = ASP ÷ (TEL x 100)	0.068	in/100ft

Duct Materials Used

Trunk duct: Round flex vinyl, Fiberglass board

Branch duct: Round flex vinyl

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

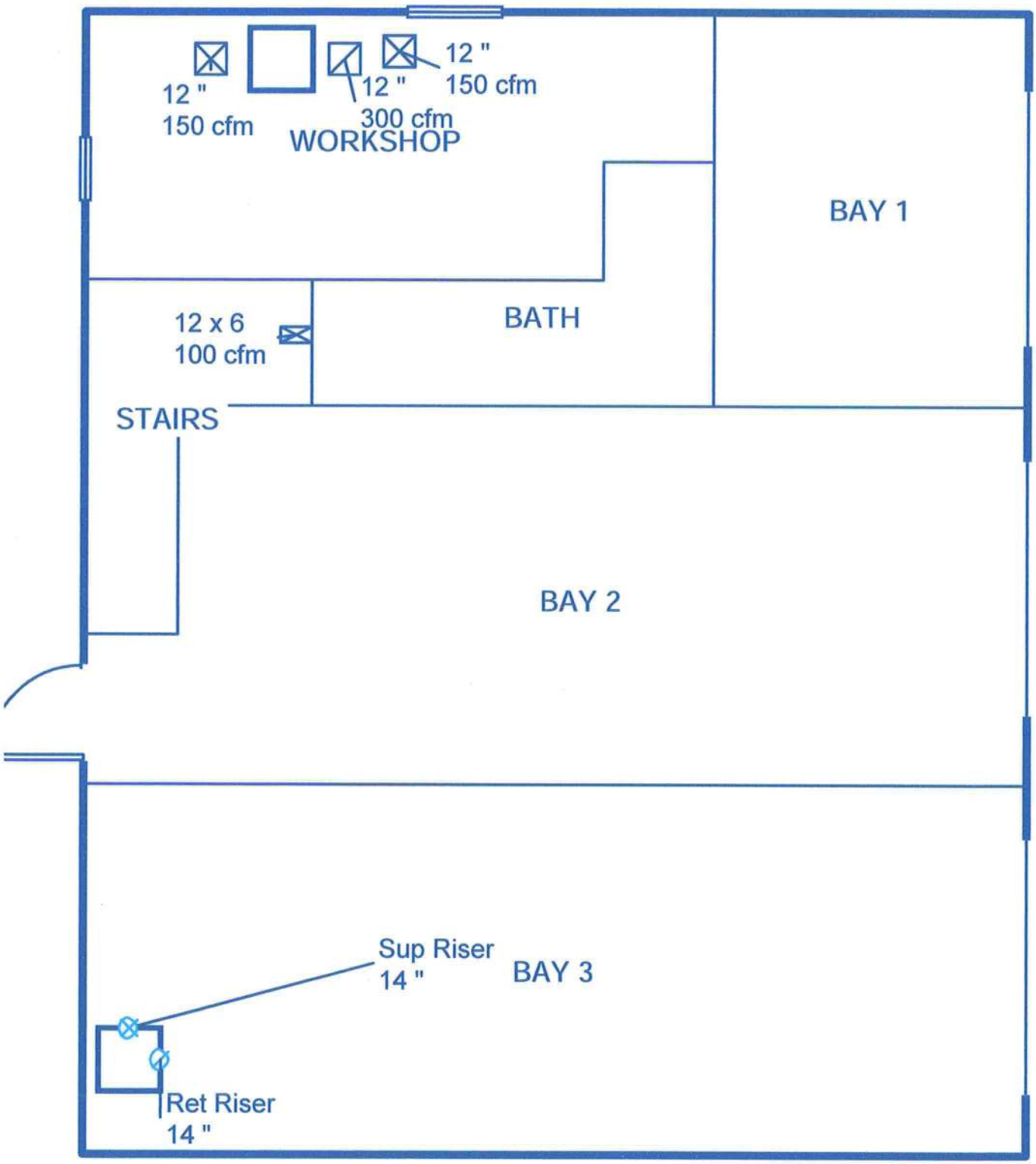
Contractor's printed name: JEFF BABIONE

Contractor's signature: Jeffrey T Babione Date: 4-20-2021

Reserved for County, Town Municipality or Authority having jurisdiction use.

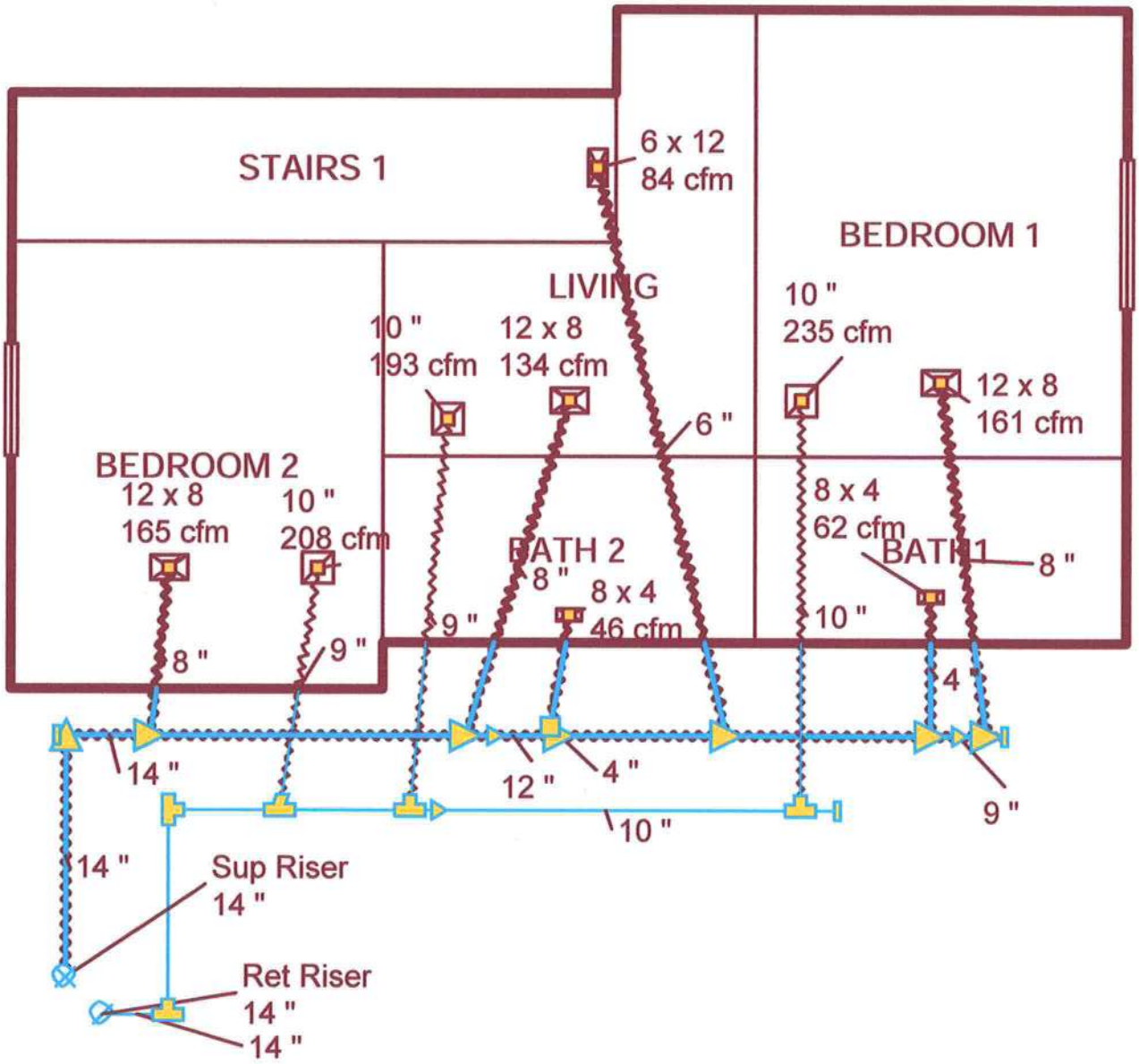
*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

Level 1



Job #: **Performed by JEFF for:** RELYEA RESIDENCE GARAGE AREA HIGH SPRINGS, FL Phone: 352-222-3443	**BABIONE'S A/C & HEATING INC.** 820 N MAIN ST. WILLISTON, FL 32696 Phone: 352-529-1034 Fax: 352-529-0007 www.babionesac.com jeffbabione@embarqmail.com	Scale: 1 : 54 Page 1 Right-Suite® Universal 2018 18.0.16 RSU09167 2021-Apr-19 14:44:58 ...soft HVAC\RELYEA GARAGE BLD

SECOND FLOOR



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